

P-6.1 Summarize the production of sound and its speed and transmission through various media.

Revised Taxonomy Level 2.4 Summarize conceptual knowledge

In Physical Science students

- ❖ Understand that sound waves are longitudinal mechanical waves
- ❖ Understand how the particles of the medium are disturbed in a longitudinal wave
- ❖ “Summarize reflection and interference of sound waves.

It is essential for all students to

- ❖ Describe the behavior of waves in various media
- ❖ Analyze the behavior of waves at boundaries between media (propagation, refraction, inverted and erect reflection)
- ❖ Compare constructive and destructive interference
- ❖ Analyze the relationship between the phenomena of interference and the principle of superposition.
- ❖ Explain how a standing wave is formed
- ❖ Explained how forced vibrations or oscillations can produce resonance
- ❖ Explain the variations of the speed of sound in different media.

Assessment

The revised taxonomy verb summarize means “to abstract a general theme or major point” For this indicator, the major focus of assessment should be to insure that students have a deep conceptual understanding of the production and transmission of sound waves based on principals of waved transmission and propagation. Conceptual knowledge requires that students understand the interrelationships among the basic elements within a larger structure that enable them to function together. In this case, that students understand the effect that each wave property has on sound transmission and propagation.